

Appln. No. 09/993,067
Amendment dated June 21, 2005
Reply to Office action of March 23, 2004

Attorney Docket No.: TS00-251
Atty Ref.: N1280-01080

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 1. (Currently Amended) A data processing and display method for use in
2 interactive manufacturing process management comprising:
3 uploading a first variable value for a manufacturing stage from a database;
4 subtracting said first variable value from a first target value to obtain a first
5 variable variance;
6 displaying a first variable variance bar above a stage axis on a graphical display
7 device wherein said first variable variance bar is non-filled if said first variable variance
8 is positive and is filled if said first variable variance is negative;
9 uploading a second variable value for said manufacturing stage from said
10 database;
11 subtracting said second variable value from a second target value to obtain a
12 second variable variance;
13 displaying a second variable value bar below said stage axis on said graphical
14 display device wherein said second variable value bar is non-filled; and
15 displaying a second variable variance bar below said second variable bar on said
16 graphical display device, wherein if said second variable variance is positive ~~wherein~~
17 said second variable variance bar is filled,
18 wherein said first target value and said second target value are not graphically
19 shown on said graphical display device.

1 2. (Original) The method according to Claim 1 wherein said first variable
2 comprises work-in-progress (WIP) .

1 3. (Original) The method according to Claim 1 wherein said second variable
2 comprises production moves.

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13 variance bar is above a stage axis, is non-filled if said first variable variance is positive,
14 and is filled if said first variable variance is negative, wherein said second variable
15 value bar is below said stage axis is non-filled, and wherein said second variable
16 variance bar ~~is filled and~~ is below said second variable value bar and is filled if said
17 second variable variance is positive, wherein said first target value and said second
18 target value are not graphically shown on said graphical display means.

1 13. (Canceled)

1 14. (Original) The apparatus according to Claim 12 wherein said first variable
2 comprises work-in-progress.

1 15. (Original) The apparatus according to Claim 12 wherein said second variable
2 comprises production moves.

1 16. (Original) The apparatus according to Claim 12 wherein said filled bars
2 comprise any of the group of: color filled, texture filled, and gray-scale filled.

1 17. (Original) The apparatus according to Claim 12 wherein said manufacturing
2 process comprises integrated circuit manufacturing.

1 18. (Original) The apparatus according to Claim 12 wherein said graphical
2 display means is further capable of displaying said first variable, said first variable
3 variance, said second variable, and said second variable variance for said stage as text
4 data.

1 19. (Original) The apparatus according to Claim 18 wherein said text data is
2 displayed in response to a user input device.

1 20. (Original) The apparatus according to Claim 12 wherein said graphical
2 display means is further capable of displaying a sub-category bar above said first
3 variable variance bar wherein said sub-category bar comprises an amount of said first

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15 displaying a production moves variance bar below said production moves value
16 bar on said graphical display device, wherein if said if said production moves variance
17 is positive ~~wherein~~ said production moves variance bar is filled,
18 wherein said work-in-progress target value and said production moves target
19 value are not graphically shown on said graphical display device.

1 9. (Original) The method according to Claim 8 wherein said filled bars comprise
2 any of the group of: color filled, texture filled, and gray-scale filled.

1 10. (Original) The method according to Claim 8 further comprising displaying
2 said work-in-progress value, said work-in-progress variance, said production moves
3 value, and said production moves variance for said stage as text data on said graphical
4 display device.

1 11. (Original) The method according to Claim 8 further comprising displaying a
2 sub-category bar above said work-in-progress variance bar wherein said subcategory
3 bar comprises an amount of said work-in-progress value within a defined sub-category
4 and wherein said sub-category bar is distinctively filled.

1 12. (Currently Amended) A data processing and display apparatus for use in
2 interactive manufacturing process management comprising:
3 a means of uploading a first variable value and a second variable value for a
4 manufacturing stage from a database;
5 a means of storing said first variable value, said second variable value, and
6 computation results;
7 a means of calculating a first variable variance and a second variable variance,
8 wherein said first variable variance is obtained by subtracting said first variable value
9 from a first target value, and said second variable variance is obtained by subtracting
10 said second variable value from a second target value; and
11 a graphical display means capable of displaying a first variable variance bar, a
12 second variable value bar, and a second variable variance wherein said first variable

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1 4. (Original) The method according to Claim 1 wherein said filled bars comprise
2 any of the group of: color filled, texture filled, and gray-scale filled.

1 5. (Original) The method according to Claim 1 wherein said manufacturing
2 process comprises integrated circuit manufacturing.

1 6. (Original) The method according to Claim 1 further comprising displaying
2 said first variable, said first variable variance, said second variable, and said second
3 variable variance for said stage as text data on said graphical display device.

1 7. (Original) The method according to Claim 1 further comprising displaying a
2 sub-category bar above said first variable variance bar wherein said sub-category bar
3 comprises an amount of said first variable within a defined sub-category and wherein
4 said subcategory bar is distinctively filled.

1 8. (Currently Amended) A data processing and display method for use in
2 interactive integrated circuit manufacturing process management comprising:
3 uploading a work-in-progress value for a manufacturing stage from a database;
4 subtracting said work-in-progress value from a work-in-progress target value to
5 obtain a work-in-progress variance;
6 displaying a work-in-progress variance bar above a stage axis on a graphical
7 display device wherein said work-in-progress variance bar is non-filled if said work-in-
8 progress variance is positive and is filled if said work-in-progress variance is negative;
9 uploading a production moves value for said manufacturing stage from said
10 database;
11 subtracting said production moves value from a production moves target value
12 to obtain a production moves variance;
13 displaying a production moves value bar below said stage axis on said graphical
14 display device wherein said production moves value bar is non-filled; and

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4 variable within a defined subcategory and wherein said sub-category bar is
5 distinctively filled.

1 21. (New) A data processing and display method for use in interactive
2 manufacturing process management comprising:
3 uploading a first variable value for a manufacturing stage from a database;
4 subtracting said first variable value from a first target value to obtain a first
5 variable variance;
6 displaying a first variable variance bar above a stage axis on a graphical display
7 device wherein said first variable variance bar is non-filled if said first variable variance
8 is positive and is filled if said first variable variance is negative;
9 uploading a second variable value for said manufacturing stage from said
10 database;
11 subtracting said second variable value from a second target value to obtain a
12 second variable variance;
13 displaying a second variable value bar below said stage axis on said graphical
14 display device wherein said second variable value bar is non-filled and extends
15 downwardly from said stage axis to a depth proportional to a magnitude of said second
16 variable value; and
17 displaying a second variable variance bar below said second variable bar on said
18 graphical display device and extending downwardly from said second variable bar to a
19 depth proportional to a magnitude of said second variable variance, wherein if said
20 second variable variance is positive, said second variable variance bar is filled,
21 wherein said first target value and said second target value are not graphically
22 shown on said graphical display device.